

# THREE VARIETIES OF SERIAL VERB CONSTRUCTIONS IN VIETNAMESE\*

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June 11<sup>th</sup> 2004

## 0. Introduction.

In this paper I provide a comparative analysis of three serial verb constructions (SVC) in Vietnamese using the framework of Lexical Functional Grammar (LFG) and a novel adaptation of *predicate composition* (Alsina, 1997). In the literature SVC's have been given a broad range of definitions. Following Collins (1997) I adopt the following as a minimal empirical description:

- (1) A serial verb construction is a succession of verbs and their complements (if any) with one subject and one tense value that are not separated by any overt marker of coordination or subordination.<sup>1</sup>

Among the possible patterns identified by this description, the focus of the present study is limited to the following three varieties<sup>2</sup>.

- (2) *Activity-goal*  
Tôi tìm thấy một bông hoa.  
I seek see one CL flower  
'I find a flower.'

- (3) *Motion-path*  
Tôi rơi vào một cái lỗ.  
I fall enter one CL hole  
'I fall into a hole.'

- (4) *Resultative*  
Tôi đốt một cái nhà cháy.  
I ignite one CL house burn  
'I burn down a house.'

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\* Special thanks to native-Vietnamese speakers Đung Do and Kimloan Hill who generously contributed their time judgments. Additional thanks to Maria Polinsky, Dan Brassil and Farrell Ackerman for helpful discussions. Any errors of fact and/or interpretation remain my own.

<sup>1</sup> *Linguistic Inquiry*. Vol.28, No.3, p.462.

<sup>2</sup> Other possible varieties include lexical compounds in which one or both verbs cannot be used independently; causatives with verbs like *làm*; reduplicatives; or combinations with *được*.

Using a variety of syntactic and semantic tests I show that each of these SVC varieties is a monoclausal structure in which two verbs function as a single predicate sharing one or more arguments. Contra Baker (1989) or Collins (1997), I contend that a more adequate account of the phenomena exemplified by examples (2-4) is obtained by appeal to LFG<sup>3</sup>. Linguistic information in LFG is posited to be encoded at 3 levels of representation: functional, argument, and constituent. These are non-derivational, co-descriptions simultaneously in correspondence with one another. Unlike constructions containing a simple predicate (*e.g.* John threw the ball.), these SVC varieties do *not* have a one-to-one mapping between these levels. Instead, a single (complex) predicate with shared arguments at the level of *f*-structure is realized by two morphological verbs at the level of *c*-structure mediated by a complex *a*-structure. Moreover, I suggest linear order in these SVC varieties is constrained by principles governing the well-formedness of event-structure<sup>4</sup> rather than the Projection Principle, the principle strength of Baker’s account.

The paper is organized as follows. Activity-goal SVC are examined first, as these represent a variety for which Baker’s analysis cannot provide an account. The LFG account provided for activity-goal SVC is then extended to the motion-path and resultative varieties with their similarities and differences addressed. Some implications of this study’s findings for verb serialization generally and for Vietnamese in particular as well as for LFG theory are discussed in the conclusion.

## 2. Activity-Goal SVC.

Following are some examples of SVC in Vietnamese of the activity-goal variety.

- (5) Anh ta nắm lấy tay tôi.  
 he hold take hand I  
 ‘He shakes my hand.’
- (6) Tôi can ngăn hẳn của anh ta  
 I advise against stop hostility POSS he  
 ‘I discourage his hostility.’
- (7) Cô ấy ao ước yêu mỹ vị.  
 she desire love delicacies.  
 ‘She cherishes delicacies.’

<sup>3</sup> Bresnan (2001) and Dalrymple (2001) among others.

<sup>4</sup> Rappaport Hovav & Levin (2001) and Weschler (1997, 2003) among others.

Any SVC elicited of this variety involve two transitive verbs sharing both a subject and a complement. In none of the elicited data may V1 and V2 be inverted. In addition, any attempt to split up V1 and V2 either results in ungrammaticality or the result is no longer an SVC as in (8) below.

- (8)a. Tôi tìm và chóng thấy bông hoa.                      vs.                      b. \*Tôi tìm chóng thấy bông hoa.  
       I seek and quickly see CL flower    I seek quickly see CL flower  
       ‘I seek and quickly see flowers.’

## 2.1 Evidence of monoclausality.

Unitary scope of tense, negation and adverbial modification are chief among the evidence that the two verbs in activity-goal SVC form a monoclausal structure as shown below.

### 2.1.1 Unitary scope of tense.

- (9) Tôi sẽ tìm thấy bông hoa.  
       I FUT seek see CL flower  
       ‘I will find flowers.’
- (10) \*Tôi tìm sẽ thấy bông hoa.  
       I seek FUT see CL flower
- (11) \*Tôi sẽ tìm sẽ thấy bông hoa.  
       I FUT seek FUT see CL flower

Tense in Vietnamese is expressed with a marker such as *đang* for the progressive, *đã* for the past or *sẽ* for the future. The usual position of these markers is immediately preceding a verb. The ungrammaticality of (10) and (11) indicates that in these SVC there can only be one tense marker and that it must precede both verbs. In particular, (10) cannot mean ‘I seek (and) will see flowers.’

### 2.1.2 Unitary scope of negation.

- (12) Tôi không tìm thấy bông hoa.  
       I NEG seek see CL flower  
       ‘I do not find flowers.’
- (13) \*Tôi tìm không thấy bông hoa.  
       I seek NEG see CL flower
- (14) \*Tôi không tìm không thấy bông hoa.  
       I NEG seek NEG see CL flower

Negation in Vietnamese may be expressed by the negative particle *không* which also usually precedes a verb. Here again, the ungrammaticality of (13) and (14) indicate that there can only be

one negative particle in these SVC and that it must precede both verbs. Similar to (10), the example in (13) cannot mean ‘I seek (and) do not see flowers’.

### 2.1.3 Unitary scope of adverbial modification.

(15) Tôi không tìm thấy bông hoa.  
I chóng seek see CL flower  
‘I quickly find flowers.’

(16) \*Tôi tìm chóng thấy bông hoa.  
I seek quickly see CL flower

(17) \*Tôi chóng tìm chóng thấy bông hoa.  
I quickly seek quicky see CL flower

Many adverbs in Vietnamese are expressed with the use of the phrase *một cách*. . . ‘in a manner. . .’ followed by an adjective. The usual placement of this phrase is at the end of a clause. The adverb *chóng* is one of a few exceptions which may precede a verb. The ungrammaticality of (16) and (17) indicate that the use of an adverbial must take scope over both verbs. The example in (16) also cannot mean ‘I seek (and) quickly see flowers’.

### 2.1.4 Lack of temporal or locative asymmetry.

(18) \*Bây giờ tôi tìm thấy bông hoa rồi đây.  
now time I seek see CL flower later  
‘At this moment I find flowers later.’

(19) \*Bên trong nhà tôi tìm thấy bông hoa bên ngoài.  
inside house I seek see CL flower outside  
‘Inside the house I find flowers outside.’

Further evidence of monoclausality is the lack of temporal or locative asymmetry. Informants judge both (18) and (19) to be unacceptable because they pose an inherent temporal or locative contradiction, respectively.

### 2.1.5 Unitary effects of ‘do so’ anaphora.

(20) Anh ta tìm thấy bông hoa và tôi cũng làm vậy.  
he seek see CL flower and I also do so  
‘He finds flowers and I do so (find flowers) too.’

(21) Còn về tìm thấy bông hoa, tôi đã cũng làm vậy.  
matter seek see CL flower I PAST also do so  
‘As for finding flowers, I did so (find flowers) too’

A final indication of monoclausality are the unitary effects of ‘do so’ anaphora. As seen in (20) and (21) the expression *cũng làm vậy* ‘do so too’ cannot refer to the meaning of just *tìm* ‘seek’ or just *thấy* ‘see’, but only to the combined meaning of V1 and V2.

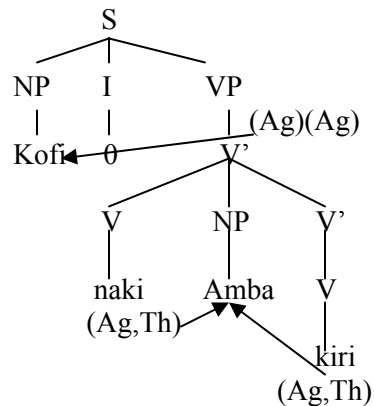
## 2.2 Two alternative analyses.

In this section two different alternative analyses using Government and Binding theory proposed by Baker and Collins, respectively, are each shown to be problematic for activity-goal SVC in Vietnamese.

### 2.2.1 Baker’s Analysis.

In Baker (1989) serial verb constructions in Sranan<sup>5</sup> and Yoruba<sup>6</sup> in which two transitive verbs share a common subject and complement are analyzed using as having the following syntactic structure.

- (22) Kofi naki Amba kiri.  
 Kofi hit Amba kill  
 ‘Kofi struck Amba dead.’



This structure requires special amendment of standard X-bar theory by a Head-licensing Condition (HLC) to accommodate a ‘double-headed’ V-bar projection. The NP *Amba* is required to be directly  $\theta$ -marked by the verb *naki*, its structural sister; and indirectly (*i.e.*

<sup>5</sup> A Caribbean creole.

<sup>6</sup> A Kwa language of West Africa

predicationally) by the verb *kiri*, a projection of its structural sister. The external  $\theta$ -roles of both verbs percolate to the maximal projection VP where they combine to be jointly assigned to the subject. Other possible arrangements of a minimally articulated double-headed V-bar such as  $[_{V'} \text{ hit } [_{NP} \text{ Amba}] \text{ kill}]$  or  $[_{V'} \text{ hit kill } [_{NP} \text{ Amba}]]$  are explicitly constrained by the following principles of word order.

(23) *Principles of word order*<sup>7</sup>.

- a.  $X^\circ$   $\theta$ -marks phrases to its right.
- b.  $X^\circ$  Case-marks phrases to its right.
- c. If  $X^\circ$  is in direct relationship  $R$  with  $Y$ , and  $Z$  is between  $X$  and  $Y$ , then  $X$  or  $Y$  must also be in  $R$  with  $Z$ .
- d. For  $m > 0$ ,  $X^m$  is predicated of an NP to its left.

Baker posits constructions in which two transitive verbs are contiguous to either 1) not actually be SVC; or 2) to be lexical compounds.

Vietnamese makes extensive use of verb-verb combinations (as well as noun-noun and adj-adj combinations). Without doubt some of these are fixed lexical compounds, particularly those in which V1, V2 or both cannot be used independently. The conclusive status of an activity-goal SVC is not easily determined. However, the examples in (24) offer some indication that these are more than simply fixed compounds.

(24)a. *Vé khoản tìm thấy chồng, cô ấy có thấy không?*    b. *\*Vé khoản phơi bày sự thật, cô ấy có bày không?*  
 about seek see husband, she (yes) see no                    about put in sun display truth, she (yes) display no  
 ‘As for finding a husband, did she find (one)?’                    (‘As for revealing truth, did she reveal (it)?’)

If the *tìm thấy* combination were a fixed compound meaning ‘find’, it would be expected that both verbs are required to convey that meaning, as is the case in (24)b. Yet in (24)a the second occurrence of *thấy* alone, contrary to expectation, does convey ‘find’ by in effect ‘anaphorically’ substituting for the combined meaning of *tìm thấy*.

On the premise that the verb combinations in the activity-goal variety are SVC, Baker’s analysis is unable to account for these constructions. Postulating either a  $[_{V'} \text{ hit kill } [_{NP} \text{ Amba}]]$  or a  $[_{V'} \text{ hit } [_{V'} \text{ kill } [_{NP} \text{ Amba}]]]$  structure would violate (23)c as in each case both verbs assign their  $\theta$ -roles to the right, but the adjacency between V1 and the NP is disrupted by V2<sup>8</sup>.

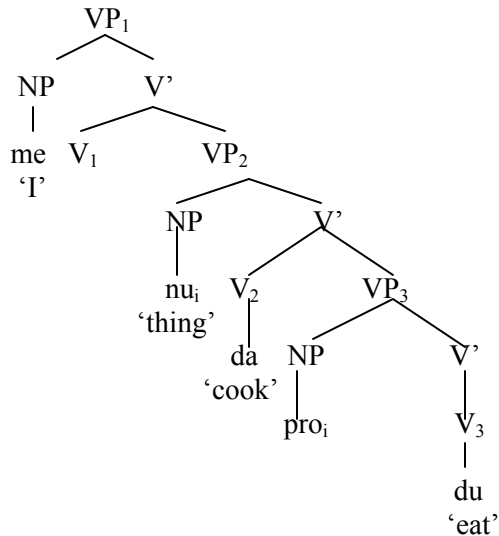
<sup>7</sup> based on Travis (1984) and Koopman (1984).

<sup>8</sup> This same conclusion is reached by Kuhn (1992) using ditransitive SVC like *mua cho* (literally ‘buy’ ‘give’). SVC of this variety are not addressed in this study.

### 2.2.2 Collin's Analysis.

In Collins (1997) Ewe<sup>9</sup> serial verb constructions in which two transitive verbs share a common subject and complement are analyzed as having the following syntactic structure.

- (25) M-a da nu du.  
 I-FUT cook thing eat  
 'I will cook something and eat (it).'



While this structure adheres to standard X-bar theory, the NP *nu* 'thing' is presumably base-generated in the SPEC of VP<sub>3</sub>, an unusual position for a 'complement'. In this position *nu* is also presumably indirectly  $\theta$ -marked by both *du* 'eat' and *da* 'cook', although Collins does not explicitly state this. Moreover and 'extra' VP projection is required in order to enable the movement of both verbs (after the NP *nu* has moved) to achieve the surface word order. Part of Collins proposal is that V<sub>2</sub> incorporates into V<sub>1</sub> at LF where the external  $\theta$ -roles of both verbs can be jointly assigned. However, this analysis violates the Projection Principle in that *du* 'eat' does not assign the subject NP *me* 'I' an external  $\theta$ -role at D-structure. Collins suggests that following Chomsky (1993, 1994) external  $\theta$ -role assignment at LF is consistent with the elimination of the Projection Principle.<sup>10</sup>

Like Baker, Collins does not explicitly analyze any SVC in which two transitive verbs are contiguous. His proposed structure in (25) could accommodate such constructions without

<sup>9</sup> A Kwa language spoken in Ghana, Togo and Benin.

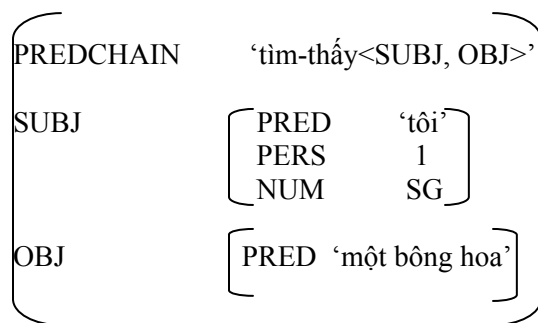
<sup>10</sup> its constraints alternatively derived from 'economy principles'.

requiring the movement of the object NP *nu* ‘thing’. However, an ‘extra’ VP would still be needed in order for both verbs to move. Moreover, external  $\theta$ -role assignment would still need to occur at LF, in violation of the Projection Principle. Thus, adoption of this proposal for activity-goal SVC in Vietnamese would come at a high theoretical cost and questionable justification.

### 2.3 An analysis of activity-goal SVC using LFG.

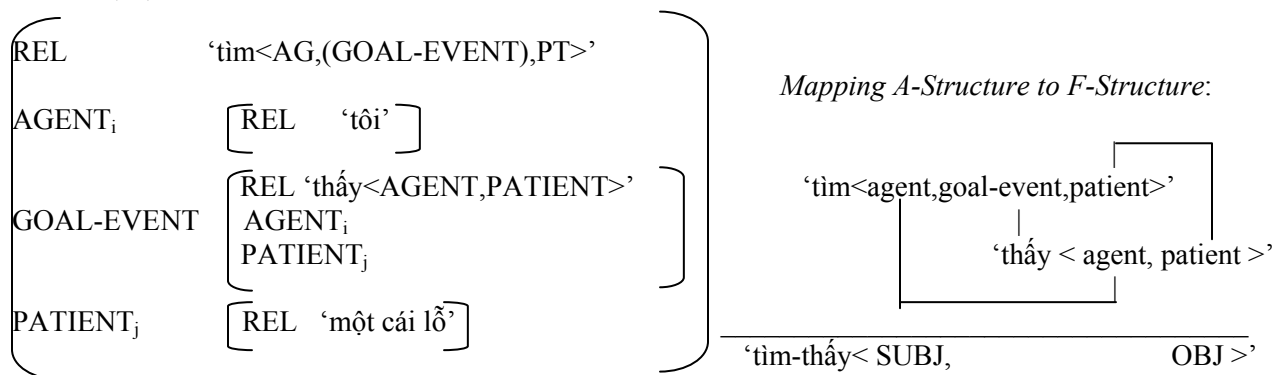
For serial verb constructions like the activity-goal variety in Vietnamese in which two transitive verbs share a common subject and complement, I propose the following analysis using LFG. The functional structure for the SVC in (2), repeated here, encodes the functional combination of the verbs *tìm* ‘seek’ and *thấy* ‘see’ as a single complex predicate chain *tìm-thấy* ‘find’ requiring a functional SUBJECT and a functional OBJECT as shown in (26).

(26) *F*-Structure for: Tôi tìm thấy một bông hoa.  
 I seek see one CL flower  
 ‘I find a flower.’



At the level of constituent structure the representation of functional structure in (26) is mediated by the complex argument structure depicted in (27).

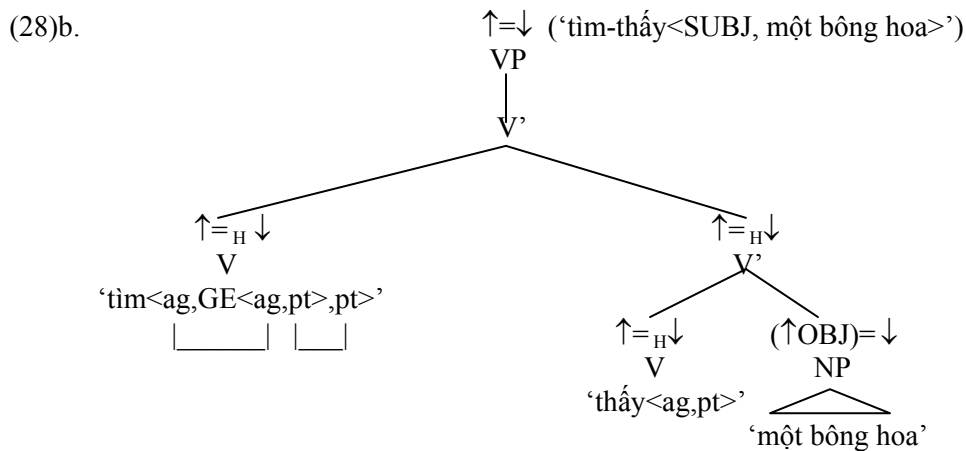
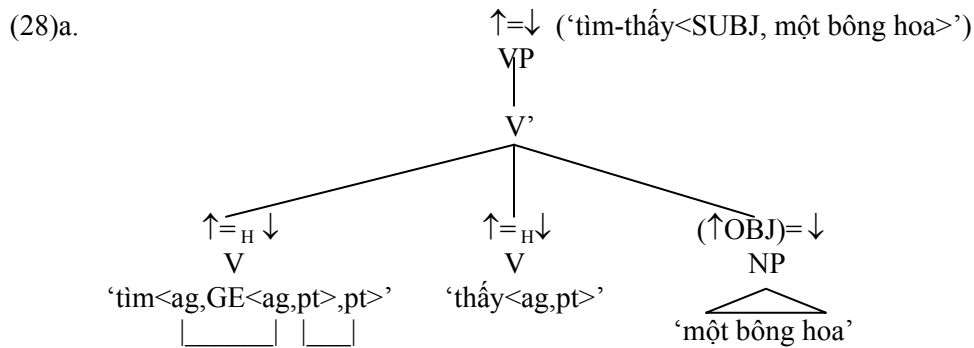
(27) *A*-Structure:



Crucially, at the level of argument structure, the V1 RELATION determines the variety of SVC and its formation. Thus, the RELATION *tìm* when initiating an SVC requires three arguments: an AGENT, a GOAL-EVENT and a PATIENT. The AGENT of *tìm* is the RELATION *tôi*, the GOAL-EVENT is the V2 RELATION *thấy* and the PATIENT is the RELATION *một cái lĩ*. The GOAL-EVENT *thấy* itself requires an AGENT and a PATIENT both of which are shared with the respective arguments of the V1 RELATION *tìm*.

The *F*-structure and complex *A*-structure correspond to two possible representations at the level of constituent structure as shown in (28).

2 possible *C*-Structures for: Tôi tìm thấy một bông hoa  
 I seek see one CL flower  
 ‘I find a flower.’



Each of these possible representations depicts a novel adaptation<sup>11</sup> of ‘predicate composition’ (Alsina, 1997) to account for the ‘mismatch’ between *A*-structure (repeated at the lowest nodes) and

<sup>11</sup> The only use of ‘predicate composition’ in the literature with which I am familiar is in application to causatives by both Alsina (1997) and Bodomo (1998).

$F$ -structure (repeated at the highest node). Unification of shared arguments is triggered by an incomplete grammatical function, the GOAL-EVENT (GE), associated with the argument-structure of V1 *tìm*. The  $\uparrow_{=H}\downarrow$  notation is defined by Alsina as follows.

(29) *Predicate Composition:*

$$\begin{aligned} \uparrow_{=H}\downarrow &\equiv_{\text{def}} (\uparrow \backslash \text{PRED}) = (\downarrow \backslash \text{PRED}) \\ &(\uparrow \text{PRED}) = (F((\downarrow \text{PRED}), (\rightarrow_H \text{PRED}))) \end{aligned}$$

The slash indicates that a node's PRED feature is excluded from  $F$ -structure of the mother node and instead replaced by the result of a function  $F$  joining its PRED value with that of its sister node as indicated by the equation  $\rightarrow_H$  (regardless of linear precedence).

At the level of both  $F$ -structure and  $A$ -structure activity-goal SVC in Vietnamese are ambiguous regarding these two  $C$ -structure representations. If independently corroborating evidence establishes that Vietnamese is a strictly binary-branching configurational language, (28)b would be optimal. In absence of such evidence, (28)a is favored by virtue of being the minimally articulated and thus simpler of the two. Not yet addressed in this LFG-based analysis is why a linear order like that in (30) is ungrammatical for activity-goal SVC in Vietnamese.

- (30) \*Tôi tìm một bông hoa thấy.  
 I seek one CL flower see  
 ('I find a flower.')

Section 5 is devoted to a discussion of this point.

### 3. Motion-path SVC.

Following are some examples of SVC in Vietnamese of the motion-path variety.

- (31) Tôi đến vào nhà anh.  
 I come into house you  
 'I come into your house.'

- (32) Tôi phồng lên.  
 I swell ascend  
 'I swell up.'

- (33) Tôi ngồi xuống.  
 I sit descend  
 'I sit down.'

Any SVC elicited of this variety involve two intransitive verbs sharing a subject. In none of the elicited data may V1 and V2 be inverted. In addition, any attempt to split up V1 and V2 either results in ungrammaticality or the result is no longer an SVC as in (34-35) below.

(34) Tôi đến và chóng vào nhà anh.  
I come and quickly enter house you  
'I come and quickly enter your house.'

(35)a. \*Tôi đến chóng vào nhà anh. vs. b. Tôi chóng đến vào nhà anh.  
I come quickly enter house you I quickly come enter house you  
'I quickly come into your house.'

Example (35)a in particular cannot mean 'I come quickly into your house.'

### 3.1 Evidence of monoclausality.

The same tests for monoclausality as described for the activity-goal SVC in section 2.1 apply to motion-path SVC. Thus, in the interests of expediency, the following data illustrating the monoclausality of motion-path SVC is provided without additional commentary.

#### 3.1.1 Unitary scope of tense.

(36)a. Tôi sẽ đi về đây. vs. b. \*Tôi đi sẽ về đây.  
I FUT go return there I go FUT return there  
'I will go back there.'

#### 3.1.2 Unitary scope of Negation.

(37)a. Tôi không đi về đây. vs. b. \*Tôi đi không về đây.  
I NEG go return there I go NEG return there  
'I don't go back there.'

#### 3.1.3 Unitary scope of adverbial modification.

(38)a. Tôi đi chóng về đây. vs. b. \*Tôi đi chóng về đây.  
I go quickly return there I go quickly return there  
'I quickly go back there.'

#### 3.1.4 Lack of temporal and locative asymmetry.

(39)a. \*Bây giờ tôi ngồi xuống rồi đây. vs. b. \*Bên trong nhà tôi ngồi xuống bên ngoài.  
now time I sit descend after now inside house I sit descend outside  
'(Presently I sit down later.)' ('Inside the house I sit down outside.')

#### 3.1.5 Unitary effects of 'do so' anaphora/ellipsis:

(40)a. Anh ta đi về đây và tôi cũng làm vậy. vs. b. Còn về đi về đây tôi đã cũng làm vậy.  
he go return there and I also do so matter go return there I PAST also do so  
'He goes back there and I do so (go back) too.' 'As for going back there I did so (go back) too.'

### 3.2 Constituency of motion-path SVC.

In some motion-path SVC V2 is followed by an NP as in (3) and (31). Omitting it in these examples is ungrammatical indicating the NP is an argument as opposed to an adjunct. Furthermore, including the NP without V2 is also ungrammatical, indicating that the NP is specifically an argument of V2. The following examples illustrate these findings.

- (41)a. \*Tôi rơi vào.  
I fall enter  
(‘I fall into.’)
- b. \*Tôi đến nhà anh.  
I come house you  
(‘I come your house’)

#### 3.2.1 Unable to scramble VP2 in motion-path SVC.

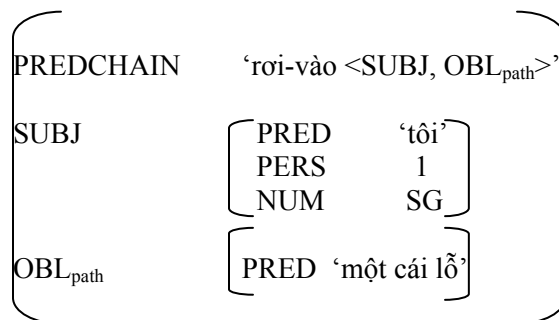
The examples in (41) show that these motion-path SVC are comprised of a V1 and VP2. The examples in (42) are evidence that the entire VP2 cannot scramble and must immediately follow V1.

- (42)a. \*Vào một cái lỗ tôi té.  
enter one CL hole I fall  
(‘Into a hole I fall.’)
- b. \*Lên tôi ngẩng.  
up I raise  
(‘Up I lift (my head).’)
- c. \*Vào nhà anh tôi đến.  
enter house you I come  
(‘Into your house I come.’)

### 3.3 An analysis of motion-path SVC using LFG.

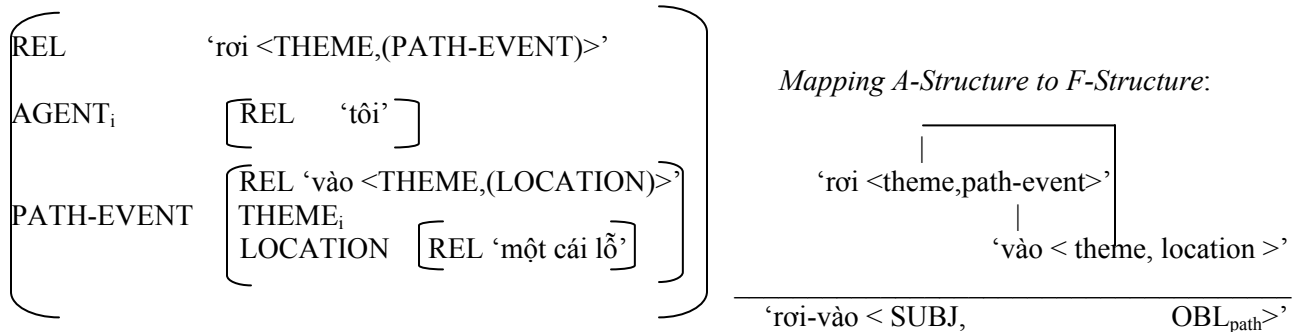
For serial verb constructions like the motion-path variety in Vietnamese in which two intransitive verbs share a common subject, I extend the LFG analysis for activity-goal SVC in the following manner. The functional structure for the SVC in (3), repeated here, encodes the functional combination of the verbs *rơi* ‘fall’ and *vào* ‘enter’ as a single complex predicate chain *rơi-vào* ‘fall-into’ requiring a functional SUBJECT and a functional OBLIQUE<sub>path</sub> as shown in (43).

- (43) *F*-Structure for: Tôi rơi vào một cái lỗ.  
I fall enter one CL hole  
(‘I fall into a hole.’)



At the level of constituent structure the representation of functional structure in (43) is mediated by the complex argument structure depicted in (44).

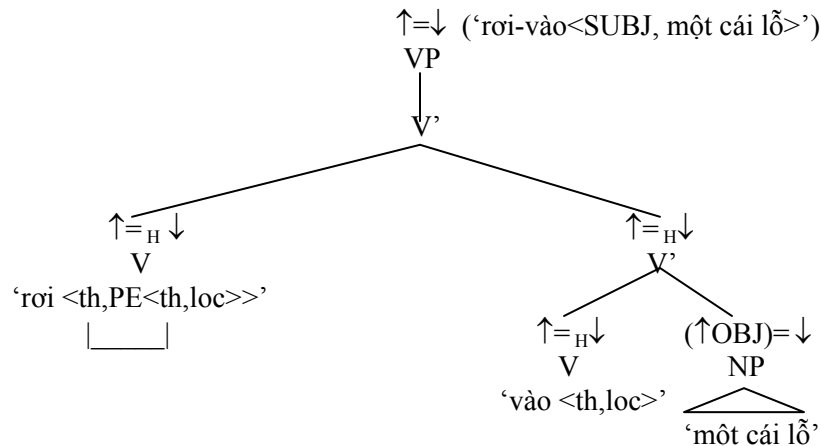
(44) *A-Structure*:



As previously seen, at the level of argument structure, the V1 RELATION determines the variety of SVC and its formation. Thus, the RELATION *roi* when initiating an SVC requires two arguments: a THEME, and a PATH-EVENT. The THEME of *roi* is the RELATION *tôi*, and the PATH-EVENT is the VP2 RELATION *vào*. The PATH-EVENT *vào* itself requires a THEME and (in some cases) a LOCATION. The THEME of the PATH-EVENT *vào* is shared with that of V1 RELATION *roi*.

The *F*-structure and complex *A*-structure correspond at the level of constituent structure to the representation shown in (45).

(45) *C-Structure* for: Tôi rơi vào một cái lỗ.  
 I fall enter one CL hole  
 'I fall into a hole.'



This representation also depicts an adaptation of ‘predicate composition’ (Alsina, 1997) to account for the ‘mismatch’ between *A*-structure (repeated at the lowest nodes) and *F*-structure (repeated at the highest node). Unification of shared arguments is triggered by an incomplete grammatical function,

the PATH-EVENT (PE), associated with the argument-structure of V1 *roi*. Section 5 is devoted to a discussion of why a linear order like that in (46) is ungrammatical for motion-path SVC in Vietnamese.

- (46) \*Vào nhà anh tôi đến.  
 enter house you I come  
 ('I come into your house.')

#### 4. Resultative SVC.

Following are some examples of SVC in Vietnamese of the resultative variety.

- |   |           |   |
|---|-----------|---|
| (47)a. Tôi thuốc chim chết.<br>I medicate bird die<br>'I poison bird (to death).' | <i>or</i> | b. Tôi thuốc chết chim<br>I medicate die bird.<br>'I poison bird (to death).' |
| (48)a Tôi đánh chết chim.<br>I beat die bird<br>'I beat bird to death.'           | <i>or</i> | b. Tôi đánh chim chết.<br>I beat bird die<br>'I beat bird to death.'          |
| (49)a Tôi cứu sống chim.<br>I save live bird<br>'I rescue bird alive.'            | <i>or</i> | b. Tôi cứu chim sống.<br>I save bird live<br>'I rescue bird alive.'           |

In any of the SVC elicited of this variety, V1 is transitive, V2 is intransitive and the object of V1 is also the subject of V2. In none of the elicited data may V1 and V2 be inverted. However, unlike activity-goal or motion-path SVC, the shared element may freely occur either between V1 and V2 or following both. Some semantic nuances which informants report differentiating these two linear orders is discussed in section 5.

#### 4.1 Evidence of monoclausality.

While some of the tests for monoclausality previously described for activity-goal and motion-path SVC also apply to the resultative variety, there are several distinct differences which are shown below.

##### 4.1.1 Unitary scope of tense.

- |   |            |  |
|---|------------|--|
| (50)a. Tôi sẽ chôn chim sống.<br>I FUT bury bird alive<br>'I will bury the bird alive.' | <i>vs.</i> | b. * Tôi chôn chim sẽ sống.<br>I bury bird IRR alive |
|---|------------|--|

The example in (50)b cannot mean 'I bury the bird, (yet) it will live'.



Also unlike activity-goal or motion-path SVC, temporal asymmetry is possible. As (55)a-b indicate, informants did not find the linear order V1-NP-V2 to be any more or less acceptable than V1-V2-NP (as reported for separate adverbial modification).

#### 4.1.5 Heavy NP shift.

(56)a. \*Anh ta đốt cái nhà mà trong đó kẻ thù đã lãng nhục anh ta cháy.  
 he ignite CL house that inside which enemy PAST torture him burn  
 ('He burns down the house inside of which the enemy tortured him.')

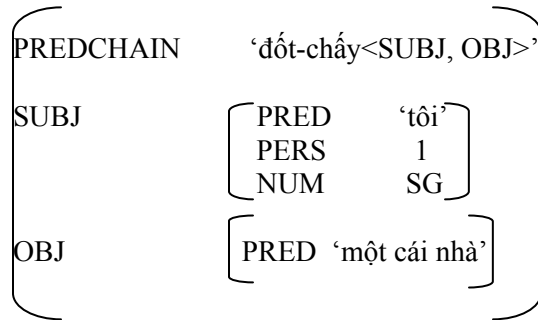
b. Anh ta đốt cháy cái nhà mà trong đó kẻ thù đã lãng nhục anh ta.  
 he ignite burn CL house that inside which enemy PAST torture him  
 'He burns down the house inside of which the enemy tortured him.'

As the examples in (56) indicate, interposing a heavy NP comprising a relative clause between V1 and V2 is not acceptable in resultative SVC<sup>12</sup>.

#### 4.3 An analysis of resultative SVC using LFG.

For serial verb constructions like the resultative variety in Vietnamese in which the object of V1 is also the subject of V2, I extend the previous analyses using LFG in the following manner. The functional structure for the SVC in (4), repeated here, encodes the functional combination of the verbs *đốt* 'ignite' and *cháy* 'burn' as a single complex predicate chain *đốt-cháy* 'burn down' requiring a functional SUBJECT and a functional OBJECT as shown in (57).

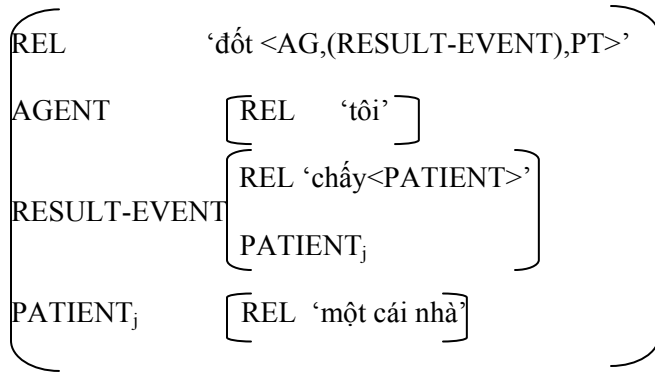
(57) F-Structure for: Tôi đốt một cái nhà cháy.  
 I ignite one CL house burn  
 'I burn down a house.'



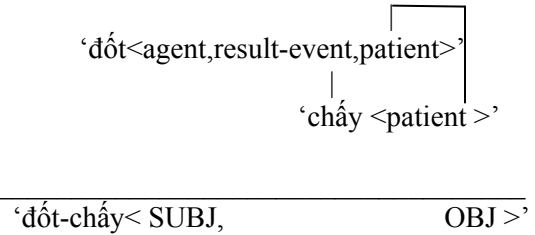
At the level of constituent structure the representation of functional structure in (57) is mediated by the complex argument structure depicted in (58).

<sup>12</sup> This is consistent with findings in the literature on other languages including English.

(58) *A-Structure*:



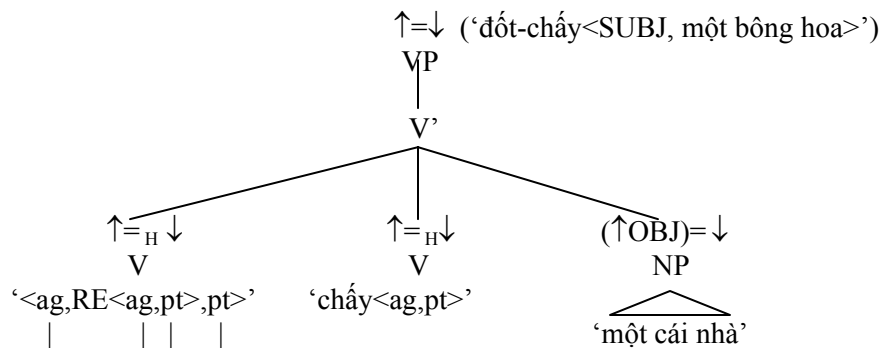
*Mapping A-Structure to F-Structure*:



Crucially, at the level of argument structure, the V1 RELATION determines the variety of SVC and its formation. Thus, the RELATION *đốt* when initiating an SVC requires three arguments: an AGENT, a RESULT-EVENT and a PATIENT. The AGENT of *đốt* is the RELATION *tôi*, the RESULT-EVENT is the V2 RELATION *cháy* and the PATIENT is the RELATION *một cái nhà*. The RESULT-EVENT *cháy* itself requires a PATIENT which is shared with the V1 RELATION *đốt*.

As examples (47-49) indicated, resultatives may be expressed in either of two linear orders: V1-V2-NP or V1-NP-V2. As LFG is non-derivational, both constituent structures are held to be in the grammar concomitantly, without any claim that one structure is derived from the other<sup>13</sup>. Ergo, the *F-structure* and complex *A-structure* for resultatives correspond to the two representations at the level of constituent structure as shown in (59)<sup>14</sup>.

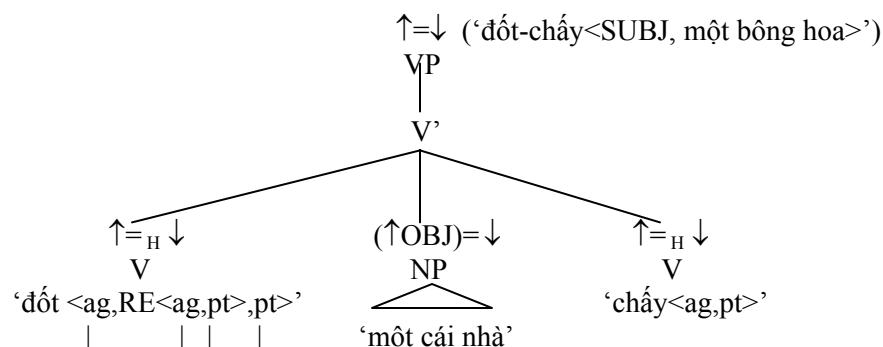
(59)a. *C-Structure* for: Tôi đốt cháy một cái nhà  
 I ignite burn one CL house  
 'I burn down a house.'



<sup>13</sup> Concomitant structures typically encode some semantic variation as discussed in section 5.

<sup>14</sup> As discussed in §2.3, should independently corroborating evidence establish Vietnamese to be a strictly binary-branching configurational language, the alternative structures [<sub>V'</sub> đốt [<sub>V'</sub> cháy [<sub>NP</sub> một cái nhà]]] or [<sub>V'</sub> [<sub>V'</sub> đốt [<sub>NP</sub> một cái nhà]] cháy] would be optimal.

(59)b. C-Structure for: Tôi đốt một cái nhà cháy  
 I ignite one CL house burn  
 ‘I burn down a house.’



Each of these representations also depicts an adaptation of ‘predicate composition’ (Alsina, 1997) to account for the ‘mismatch’ between *A*-structure (repeated at the lowest nodes) and *F*-structure (repeated at the highest node). Unification of shared arguments is triggered by an incomplete grammatical function, the RESULT-EVENT (RE), associated with the argument structure of V1 *đốt*.

#### 5. Word order constraints and configurability in Vietnamese.

In the GB-based analysis of Baker (*cf* §2.2.1) both word order and grammatical function assignment are determined by phrase-structure configuration and thus constrained *per* the Projection Principle. LFG is compatible with the notion of grammatical function in some languages being configurationally specified. However, because *f-structure* is represented independently of *c-structure*, LFG is not dependent upon this notion to account for functional assignment and has no correlate to the Projection Principle. The inability for V1 and V2 to be inverted<sup>15</sup> in any of these three varieties of SVC clearly indicates that word order in Vietnamese is constrained. I suggest the language being SVO combined with principles governing the well-formedness of event-structure-to-syntax mapping sufficiently accounts for the observable limitations on word order.

In Vietnamese activity-goal, motion-path and resultative SVC all consist of two sub-events linguistically encoded and represented as a single complex event. The following minimal pairs confirm the semantic merging of V1 and V2 in SVC.

<sup>15</sup> In some reduplicative SVC V1 and V2 can be inverted.

- (60)a. Tôi tìm mà không thấy một bông hoa. vs. b. \*Tôi tìm thấy hoa mà không thấy một bông hoa<sup>16</sup>.  
 I seek but NEG see one CL flower I find flower but NEG see one CL flower  
 ‘I seek but do not see a flower.’ (‘I find a flower but do not see a flower.’)
- (61)a. Tôi đi mà không vào đây. vs. b. \*Tôi đi vào đây mà không vào đây.  
 I go but NEG enter there I go enter there but NEG enter there  
 ‘I go but don’t enter there.’ (‘I go in there but don’t enter there.’)
- (62)a. Tôi đánh nó mà chim không chết. vs. b. \*Tôi đánh chết chim mà chim không chết.  
 I beat it but bird not die I beat die bird but bird not die  
 ‘I beat it but bird doesn’t die.’ (‘I beat bird to death but bird doesn’t die.’)

In (60-62)a V1 and V2 are in separate clauses and V2 can be successfully negated. In contrast, when both verbs form an SVC in the first clause in (60-62)b, V2 cannot be negated. The lack of temporal asymmetry previously shown in activity-goal and motion-path SVC (*cf.* §2.1.4; §3.1.4) is evidence that the sub-events in these SVC are also construed as being temporally co-extensive or what Levin & Rappaport Hovav (1999) refer to as ‘co-identified’ (*i.e.* they are represented as one event in event structure terms). Thus a verb combination like *tìm thấy* ‘seek see’ forms a single event meaning ‘find’ because in a ‘finding event’ the individual sub-events of ‘seeking’ and ‘seeing’ are no longer distinguishable from each other. Consequently, an activity-goal SVC does not survive if V1 and V2 are separated (*cf.* §2). Furthermore, the goal event is temporally dependent on the activity event precluding V1 and V2 from being inverted.

Similarly a verb combination like *đi vào* ‘go enter’ forms a single event in which the individual sub-events of ‘going’ and ‘entering’ are indistinguishable. Thus, a motion-path SVC neither survives V1 and V2 being separated nor being inverted as the path event is also temporally dependent on the motion event. The difference between activity-goal or motion-path SVC forming a single event versus resultative SVC forming a single event is the degree to which the sub-events in resultatives are construed as being temporally co-extensive. When V1 and V2 are contiguous in a resultative, the two sub-events are construed as being highly co-extensive and therefore nearly indistinguishable. This explains the preference for not interpolating an adverb between them (*cf.* §4.1.3). Conversely, when V1 and V2 in a resultative like *đánh chết* ‘beat die’ are separated by a shared argument like *chim* ‘bird’, the SVC still survives; however the two sub-events are construed as a less co-extensive progression from the first event to the second. In either variation the result event remains temporally dependent on the first event constraining V1 and V2 from being inverted.

<sup>16</sup>Outside of any special context like looking for a flower with your eyes closed.

The word order constraints imposed by event-structure well-formedness suggested here make a further prediction regarding verb serialization in Vietnamese. I have argued that V1 and V2 in all three SVC varieties examined, in being temporally co-extensive, form a single event. Should Vietnamese have a variety of SVC in which V1 and V2 are not co-extensive, such an SVC should also survive separating as well as inverting<sup>17</sup> V1 and V2. I was unable to elicit any such examples. Interestingly, in both Baker (1989) and Collins (1997) any examples of SVC with a V1-NP-V2 linear order (not including resultatives) represented a sequence or series of events unlikely to be construed as temporally co-extensive (*e.g.* cook eat; cook sell; pour drink; use stab; take cut; throw hit). When presented with such examples in either a V1-NP-V2 or V1-V2-NP order, informants consistently found them to be unacceptable as lacking an overt coordinator (*e.g.* *và* ‘and’) and in most cases a second NP. One possibility is that SVC<sup>18</sup> in Vietnamese only serve to encode two or more temporally co-extensive events. If this were substantiated, it could further explain the inability to combine any of the three SVC varieties examined here. For example, informants consistently found combinations like (63) ill-formed and unacceptable without the use of a term like *để* ‘in order to’ between *đi về* and *tìm thấy*.

- (63) \*Tôi đã đi về tìm thấy một cuốn sách của tôi.  
 I PAST go return seek see one CL book POSS I  
 (‘I went back (to) find a book of mine.’)

Any such combinations (at least of the three SVC varieties examined) are more likely be construed as a series of events that are not temporally co-extensive and thus constrained from forming a ‘combined’ SVC.

## 6. Conclusion.

The findings of this study have several potentially far-reaching implications for verb serialization generally and for Vietnamese in particular as well as for LFG theory. Using LFG with predicate composition and event-structure well-formedness to account for SVC with V1-V2-NP word order points to these SVC being non-configurational, at least in Vietnamese; and could provide insight into other SVC like reduplicatives. The viability of this same account in other languages for constructions such as English resultatives, could be an indication that languages may have degrees of configurationality.

<sup>17</sup> Barring other semantic and/or pragmatic constraints

<sup>18</sup> Possibly excluding causatives

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